

CLAIMS:

1. A method for altering the level of an extracellular matrix (ECM) protein produced by a cell, the method including modulating expression or activity of a
5 cell division auto antigen (CDA).
2. A method according to claim 1 wherein the ECM protein is selected from the group consisting of collagen, elastin, fibrillin, fibronectin, laminin and proteoglycan.
- 10 3. A method according to claim 1 wherein the ECM protein is fibronectin or collagen IV.
4. A method according to claim 1 wherein the cell originates from renal
15 tissue or vascular tissue.
5. A method according to claim 1 wherein the cell is selected from the group consisting of a renal podocyte, a renal proximal tubule cell, a renal collecting duct cell, a foam cell and a macrophage cell.
- 20 6. A method according to claim 1 wherein the CDA comprises an N-terminal proline-rich domain, a central basic domain, and a C-terminal bipartite acidic domain.
- 25 7. A method according to claim 1 wherein the CDA is cell division autoantigen 1 (CDA 1), or a fragment, functional equivalent, analogue, mutant or variant thereof.
8. A method according to claim 7 wherein the CDA1 is encoded by a
30 nucleotide sequence according to Figure 7.
9. A method according to claim 7 wherein the CDA1 has an amino acid sequence according to Figure 8 or functional equivalent or derivative thereof

10. A method for treating or preventing a condition related to synthesis of an ECM protein, the method including modulating the expression and/or activity of a CDA.
- 5 11. A method according to claim 10 wherein the condition is fibrosis.
12. A method according to claim 11 wherein the fibrosis is due to a burn, a heart attack, treatment with a chemotherapeutic drug, exposure to radiation, or surgery.
- 10 13. A method according to claim 11 wherein the fibrosis is major organ fibrosis
14. A method according to claim 13 wherein the major organ is selected from
- 15 the group consisting of kidney, liver, heart and eye.
15. A method according to claim 13 wherein the major organ fibrosis is due to a condition selected from the group consisting of diabetes, hypertension, viral hepatitis, alcohol abuse, macular degeneration, retinal retinopathy and vitreal
- 20 retinopathy.
16. A method according to claim 11 wherein the condition is renal fibrosis as a result of diabetes.
- 25 17. A method according to claim 10 wherein the condition is selected from the group including systemic and local scleroderma, keloids, hypertrophic scars, atherosclerosis and restenosis.
18. A method according to claim 17 wherein the condition is atherosclerosis.
- 30 19. A method according to claim 10 wherein the condition is aneurysm.
20. A method according to claim 19 wherein the aneurysm is abdominal aortic aneurysm.

21. A method according to claim 10 wherein the CDA is CDA1
22. A non-human animal for use in studying disorders of the ECM, the animal having a cell capable of expressing a CDA at an altered level.
- 5 23. A non-human animal according to claim 22 wherein the CDA is CDA1.
24. A method of screening for an agent capable of modulating ECM synthesis, the method including the steps of
- 10 providing an animal or a cell capable of expressing a CDA,
exposing the animal or cell to the agent, and
determining the effect of the agent on the CDA expression and/or activity.
- 15 25. A method according to claim 24 wherein the CDA is CDA1,
26. An agent identified by the method according to claim 24.
27. A pharmaceutical composition including an agent according to claim 26.
- 20 28. A method for treating or preventing a condition related to an ECM protein, the method including administering to an animal in need thereof an effective amount of a pharmaceutical composition according to claim 27.
- 25 29. A method of modulating CDA expression and/or activity in a cell, the method including exposing the cell to an agent capable of modulating the expression and/or activity of a factor selected from the group consisting of angiotensin II, TGF β and connective tissue growth factor.
- 30 30. A method according to claim 29 wherein the CDA is CDA1.
31. A method of diagnosing a condition related to the synthesis of a ECM protein in an animal, the method including
obtaining a biological sample from the animal,

determining the level of CDA in the sample, and
comparing the level of CDA in the sample to a reference value
wherein a positive diagnosis is made if the level of CDA in the sample is
statistically significantly higher or lower than the reference value.

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32. A method according to claim 31 wherein the CDA is CDA1